

Claims

1. A tube mat (1, 7) made of elastomer material in the form of an extruded product comprising at least

- a first face side and a second face side (11, 12) arranged perpendicular to or at an angle in relation to the extrusion direction (Y); as well as
- a plurality of tubes (2, 8) extending between the two face sides (11, 12) parallel with the extrusion direction (Y);

characterized in that a part of the tubes (2, 8) are closed at adjustable intervals (a, b), specifically in each case with formation of an enclosed air column, whereby the tube closure (3, 9, 10) forms a one-piece elastomer composite with the tube mat (1, 7).

2. The tube mat according to claim 1, characterized in that the tube closure (9, 10) extends in a line (X) perpendicular to the extrusion direction (Y).

3. The tube mat according to claim 1, characterized in that the tube closure (9, 10) extends in a line (X) at an angle α unequal to 90° , preferably at an angle of from 45° to 80° in relation to the extrusion direction (Y).

4. The tube mat according to any one of claims 1 to 3, characterized in that the first and the second face sides (11, 12) are closed, specifically with formation of a completely closed tube system.

5. The tube mat according to any one of claims 1 to 3, characterized in that the first and/or the second face sides are partially or completely open, specifically with formation of a correspondingly open face area; however, with formation of a closed tube system in the center area of the tube mat.

6. The tube mat according to any one of claims 1 to 5, characterized in that the mat consists of a vulcanized rubber mixture based on ethylene-propylene-diene copolymer (EPDC).

7. The tube mat according to claim 6, characterized in that the hardness in Shore A amounts to 30° to 50°.

8. The tube mat according to any one of claims 1 to 5, characterized in that the mat consists of a vulcanized rubber mixture based on natural rubber (NR).

9. The tube mat according to claim 8, characterized in that the hardness in Shore A amounts to 30° to 60°.

10. The tube mat according to any one of claims 1 to 9, in particular in association with claims 3 and 5, for use as an elastic mat in the railroad bed or ballast, whereby the mat is covered with a protective layer of fleece or the like, if necessary.

11. The tube mat according to any one of claims 1 to 9, in particular in association with claims 2 and 4, for use as an elastic insert in crosstie shoe systems.

12. The tube mat according to any one of claims 1 to 9, in particular in association with claims 2 and 4, for use as an elastic substrate in rail support sites, in particular in the form of a rail substrate arranged underneath the foot of the rail.

13. A method of producing a tube mat according to any one of claims 1 to 12, characterized by the following steps of the method:

- Following extrusion, the tubes are pressed shut within the area of the closure with the help of a pressure applicator roller (15) provided with pins (16) distributed over the circumference of the roller, specifically with formation of beads (5) and closing bridges (6);

- vulcanization is carried out subsequently.

14. The method according to claim 13, characterized in that exchangeable pins (16) are used.

15. The method according to claim 13 or 14, characterized in that the vulcanization is carried out without pressure in the UHF channel, in a salt bath installation, or in a hot air installation.

16. The method according to any one of claims 13 to 15, characterized in that the tube mat (1, 7) is produced with a great length specifically with formation of closed tube segments (I, II, III, IV, V), in conjunction with subsequent cutting of the article depending on the purpose of application.